

**REMARKS/ARGUMENTS**

Reconsideration of this application is respectfully requested.

In response to the rejection of claims 1 and 22 under 35 U.S.C. §112, second paragraph, these claims have been amended above so as to avoid the alleged insufficient antecedent basis – thus obviating this ground of rejection.

The rejection of claims 1-22 under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter is respectfully traversed.

Claims 1-22 already are clearly “tied” to another statutory class (i.e., a machine or manufacture). See, for example, the explicit recitation in all of these claims requiring a computer-implemented billing system. Indeed, claim 18 specifically requires a memory having a data structure, etc., while claims 19-21 explicitly require at least one computer-readable memory storing computer executable instructions, etc. Claim 22 is explicitly directed to apparatus (namely, a computer-implemented billing system).

In any event, claims 1-22 have been amended above so as to even more explicitly “tie” the claimed subject matter to “another statutory class” (e.g., a machine or manufacture).

Still further, the claimed methodology also transforms the underlying subject matter to a different state or thing. Computer data structures constitute tangible physical things (i.e., they cannot exist except for respectively corresponding structured magnetic states or states of silicon circuitry and the like to represent such data in the real physical world and in a computer-readable form that can be accessible to a computer for processing). The methodology here recited takes one data structure or a plurality of such input data structures and transforms such input data structures to a different state or thing (i.e., different data structures).

It is believed that the above amendments should clearly avoid this outstanding ground of rejection. However, should the Examiner continue to feel that more is needed to ensure that the subject matter is well within the statutory classes of potentially patentable subject matter, it is respectfully requested that the undersigned be telephoned so that prompt resolution and further amendment can be effected.

The rejection of claims 1-22 under 35 U.S.C. § 103 as allegedly being made “obvious” based on Hardy ‘270 in view of Cool ‘632 is respectfully traversed.

Neither Hardy nor Cool discloses the features of assigning a charge type identifier to each of a number of usage records, or of processing each usage record in dependence upon its assigned CTI to produce a bill image whose format is dependent on the CTI's of

the usage records. It is, therefore, clear that the combination of Hardy and Cool, even if considered *arguendo*, still cannot render the claims obvious.

For example, the portion of Hardy (8:63-68) cited by the Examiner merely teaches:

"The 'PC Processing' network reads the tape containing main-frame processed billing records, and for each customer represented thereon produces one or more diskettes compatible with the customer's personal computer and containing that customer's telephone bill information."

The meaning of this sentence is discussed further below. It is frankly not understood how the Examiner finds this to even possibly teach "assigning a charge type identifier to each of a number of usage records" as alleged.

The longer portion cited by the Examiner (Fig. 1 and 8:55 – 9:16) also fails to disclose assigning a charge type identifier to each of a number of usage records and, therefore, it follows that it cannot further describe processing each usage record in dependence on its assigned CTI for any reason, let alone to produce a bill image, since there are no usage records nor any CTI's assigned thereto.

In any event, it is clear that Hardy is not concerned with generating bill images, but rather with transferring billing data from large magnetic tapes onto diskettes.

Similarly, as implicitly admitted by the Examiner, since Cool does not disclose assigning a charge type identifier to each of a number of usage records (since otherwise the Examiner would have relied solely on Cool), it again stands to reason that Cool cannot describe "a format of the bill image being dependent on the CTT's of the usage records" since, in Cool, there are no usage records to which CTI's have been assigned.

The applicants' invention solves the problem with prior-art 'electronic bill images.' Namely, once the 'electronic bill image' was generated, the data used in generating derived information (e.g., total discount owing to the customer joining in some discount scheme, or total charges for calls of a particular type) included in the 'electronic bill image' could not be easily accessed or edited. Hence, if a customer queried a bill, there was no way the customer or, e.g., a call center agent looking at the bill, could explain how the derived information had been arrived at, or modify that derived information to answer a complaint from the customer. The only exception to this was where the information was presented in textual form on the bill.

The applicants' solution to this problem involves keeping within the electronic bill image:

- a) records having charge type identifiers; and
- b) data structures which can be populated by the records in dependence on those charge type identifiers.

Thus, it is relatively straightforward to go from the bill seen by the customer and customer service agent, to disassemble it to its constituent records, to edit one or more of those records, and then to re-assemble an electronic bill image which answers whatever complaint caused the customer to get in touch with the customer service agent.

Hardy does not provide that facility. What Hardy does is actually neatly captured in the introductory background section of applicants' specification (pages 1-4). Hardy repeatedly makes the point that the bill data placed on the diskette exactly corresponds to the paper bill sent to the customer. Col. 30, lines 34-50 of Hardy emphasizes the point. There is no suggestion in Hardy that the data representing the paper bill is in any way editable by an operator – if it were, it would be necessary to provide a facility for editing the data provided to the diskette(s) mailed to the customer. No such facility is disclosed in Hardy.

The passages in Hardy cited by the Examiner have nothing to do with 'electronic bill images' – i.e., data which represents the visual appearance of the bill sent to the customer. They instead concern how Hardy overcomes the problem of going from the 9-track magnetic tape reels on which the service bureau's mainframe computer stores data, to the 5.25 inch diskettes used by personal computers at the time (basically he uses a personal computer which has a 9-track tape reader as a peripheral).

Hardy does not teach processing of a telephone bill image – nor is there any disclosure of using charge type identifiers on bills.

Cool is also discussed in applicants' background section. As there explained, Cool is not concerned with editing bill images, and there is no disclosure of using charge type identifiers on bills.

The Cool passage cited by the Examiner (5:16-63) does include the wording (at lines 45-52) which suggests the 'software system...gives...the ability...to decide which data is to be output in a charging detailed record and the representation of that output.' But that does not mean 'visual representation.' Instead, it just means the format of the data in terms of what fields are present in each record at what bit/byte positions. The Examiner's only other reference is to a passage in Cool (13:37-49) which mentions other types of commands used in the system. There is no suggestion that any of those commands might give the user any control over the visual representation of the bill.

Since neither Hardy nor Cool teaches keeping within the electronic bill image:

- a) records having charge type identifiers; and
- b) data structures which can be populated by the records in dependence on those charge type identifiers,

the combination of the two documents cannot render obvious the claimed invention.

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Given the fundamental deficiencies of both cited references with respect to the above-discussed aspects of independent claims 1 and 22, it is not believed necessary at this time to detail additional deficiencies in this allegedly "obvious" combination of references. Suffice it to note that, as a matter of law, it is impossible to support even a *prima facie* case of obviousness unless the cited reference(s) at least teach or suggest each and every feature in the rejected claims.

The Examiner's attention is also drawn to new dependent claims 23-26 which are believed to add yet further patentable distinctions to the claimed invention.

Accordingly, this entire application is now belied to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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